

## Shape of Image

An image represents or imitates the figure of the object. While the art of capturing image through a camera is common, duplicating an image with light is another interesting artform not as commonly explored. Image reflection in the darkness can be scary but sometimes interesting when the output of the object is represented in light. The resolution of the image captured from the camera is filtered and processed in a range of grayscales to define the intensity of image, which varies from black at the weakest intensity to white at the strongest. The value of the image's intensity can vary from 0 to 255 developed using OpenCV. The image is processed by converting image intensity to a binary image through thresholding (a technique for segmenting images). Data is further processed for the microcontroller, a minicomputer on a chip, to recognise. The microcontroller is programmed to display the image captured. The light emitting diode (LED) will light up according to the digital data processed from the image. The '1's switch on and the '0's switch off the LED or vice versa base on requirement. The image filtered is arranged in a matrix and array of data for a 2D image display. Data is transferred serially from the microcontroller to the LED matrix display. It can be applied to an advertisement signboard that appears dull at night by illuminating it, thus making it more captivating and attractive. Life is full of excitement; light helps to brighten up our dark nights.

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